

AMENDMENT TO THE CLAIMS

Prior to continued examination, please enter the following amendments to the claims without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents as follows:

1. (Not Entered) An adenovirus (Ad) with novel vector tropism and ablation of native Ad receptor tropism due to the expression of a fiber replacement protein, said fiber replacement protein comprises:
 - a) an amino-terminal portion comprising an adenoviral fiber tail domain that associates with the penton base of the adenovirus;
 - b) a chimeric rod-like, trimeric protein that provides trimerization function, wherein said rod-like trimeric protein has a diameter comparable to the native fiber protein of wild type adenovirus; and
 - c) a carboxy-terminal portion comprising a targeting ligand.
- 2-4. (Canceled)
5. (Original) The adenovirus of claim 1, wherein said fiber replacement protein retains trimerism when a sequence encoding a targeting ligand is incorporated into the carboxy-terminus.
6. (Original) The adenovirus of claim 1, wherein said fiber replacement protein is soluble.
7. (Canceled)
8. (Not Entered) The adenovirus of claim 1, wherein said rod-like, trimeric protein is selected from the group consisting of trimeric structural proteins, trimeric viral proteins and trimeric transcription factors.
9. (Original) The adenovirus of claim 1, wherein said fiber replacement protein contains isoleucine trimerization motif.
10. (Not Entered) The adenovirus of claim 1, wherein said rod-like trimeric protein contains neck region peptide from human lung surfactant D.
11. (Original) The adenovirus of claim 1, wherein said fiber replacement protein is an artificial protein having a coiled coil secondary structure, wherein said secondary structure is stable because of multiple interchain interactions.

12. (Original) The adenovirus of claim 1, wherein said targeting ligand is selected from the group consisting of physiological ligands, anti-receptor antibodies, cell-specific peptides and single chain antibodies.

13. (Original) The adenovirus of claim 1, wherein said adenovirus carries in its genome a therapeutic gene.

14. (Original) The adenovirus of claim 13, wherein said therapeutic gene is a herpes simplex virus thymidine kinase gene.

15. (Canceled)

16. (New) An adenovirus (Ad) with novel vector tropism and ablation of native Ad receptor tropism due to the expression of a fiber replacement protein, said fiber replacement protein comprises:

a) an amino-terminal portion comprising an adenoviral fiber tail domain that associates with the penton base of the adenovirus;

b) a fiber-fibritin chimeric rod trimeric protein that provides trimerization function; and

c) a carboxy-terminal portion comprising a targeting ligand.

17. (New) The adenovirus of claim 16 wherein the fiber-fibritin chimeric rod trimeric protein is a fiber-fibritin-6His chimera.

18. (New) The adenovirus of claim 16 wherein the fiber-fibritin chimeric rod trimeric protein is a fiber-fibritin-RGD-6His chimera.

19. (New) The adenovirus of claim 16, wherein said fiber replacement protein retains trimerism when a sequence encoding a targeting ligand is incorporated into the carboxy-terminus.

20. (New) The adenovirus of claim 16, wherein said fiber replacement protein is soluble.

21. (New) The adenovirus of claim 16, wherein said fiber replacement protein contains isoleucine trimerization motif.

22. (New) The adenovirus of claim 16, wherein said rod-like trimeric protein contains neck region peptide from human lung surfactant D.

23. (New) The adenovirus of claim 16, wherein said fiber replacement protein is an artificial protein having a coiled coil secondary structure, wherein said secondary structure is stable because of multiple interchain interactions.

24. (New) The adenovirus of claim 16, wherein said targeting ligand is selected from the group consisting of physiological ligands, anti-receptor antibodies, cell-specific peptides and single chain antibodies.

25. (New) The adenovirus of claim 16, wherein said adenovirus comprises a transgene.

26. (New) The adenovirus of claim 25, wherein the transgene is a herpes simplex virus thymidine kinase gene